

the burrow and disappeared, in some of these cases being found on further excavation huddled up to its next neighbor. There was no difficulty in catching any number of the birds in one's hand, and after selecting all that could be used the balance were thrown into the air when they flew away in a dazed manner as if unused to the light. The eggs of *O. furcata* proved on comparison to be a little larger than those of *O. leucorhoa*, and were more spotted at the large end. While those of the latter were fresh or nearly so, the eggs of *O. furcata* were nearly all too far advanced in incubation to be saved.

Besides the inhabited burrows there were a good many old ones, principally in well-defined areas of a few yards across, that were for some reason unused. The minks, of which there must be a large number on the island, judging from the piles of Petrel's wings found in some spots, may have systematically cleaned out these unused areas; but as the mouths of these burrows looked old and neglected this hypothesis is a doubtful one.

LAND BIRDS OBSERVED IN MID-WINTER ON SANTA CATALINA ISLAND, CALIFORNIA.

BY JOSEPH GRINNELL.

I HAD the good fortune to spend the last eight days of December, 1897, on Santa Catalina Island, which lies about 25 miles off the coast of southern California. My ornithological observations were confined to the east end of the island in the vicinity of Avalon. Catalina Island consists of a range of hills rising 1000 to 3000 feet above the sea and very much resembling in formation some sections of the mainland Coast Range of which system it is evidently a part. These hills are furrowed by innumerable ravines and cañons, and are clothed more or less thickly with low brush and cactus. The shady north slopes generally present a heavy growth of larger bushes, which often reach the size of small trees.

Birds were most numerous in the larger cañons, especially where there was any water. The majority of birds in point of numbers were winter visitants. Out of the 29 species identified, 14 are known to me to be resident on this island. They are: *Callipepla californica vallicola*, *Zenaidura macroura*, *Buteo borealis calurus*, *Haliaetus leucocephalus*, *Selasphorus alleni*, *Sayornis nigricans*, *Corvus corax sinuatus*, *Carpodacus mexicanus frontalis*, *Pipilo maculatus megalonyx*, *Lanius ludovicianus gambeli*, *Salpinctes obsoletus*, *Helminthophila celata sordida*, *Mimus polyglottos*, and *Thryothorus bewickii spilurus*.

I was surprised not to find several birds which are numerous on San Clemente Island, for Catalina lies almost exactly between that island and the mainland. Song Sparrows and Horned Larks were remarkable by their apparent absence from Catalina, and besides these, the Chipping Sparrow, Meadowlark and Bell's Sparrow were not discovered. Horned Larks and Song Sparrows are also abundant on Santa Barbara Island which lies about 20 miles northwest of Catalina. The following is a briefly annotated list of the birds detected on Santa Catalina Island during my December visit.

Callipepla californica vallicola. VALLEY PARTRIDGE.—Very abundant in the brushy cañons. The 'Quail' is not native on the island, but was originally introduced from the mainland.

Zenaidura macroura. MOURNING DOVE.—I saw several pairs among the hill-tops toward the interior of the island.

Buteo borealis calurus. WESTERN RED-TAIL.—Scarcely a day passed but what two or three of these large Hawks were seen circling among the hills. An immature specimen in very dark plumage was brought in by a local hunter.

Haliaetus leucocephalus. BALD EAGLE.—Common along the precipitous margins of the island.

Asio accipitrinus. SHORT-EARED OWL.—I examined a newly-mounted specimen in a taxidermist's shop at Avalon; it had been shot about a week before.

Speotyto cunicularia hypogæa. BURROWING OWL.—I saw a single individual on a hill-top in the interior. I was told that this Owl becomes quite numerous at times.

Ceryle alcyon. BELTED KINGFISHER.—Tolerably common along rocky shores.

Colaptes cafer. RED-SHAFTED FLICKER.—Tolerably common, being

usually flushed from the shady sides of the cañons where they dig in the damp turf for insect larvæ.

Calypte anna. ANNA'S HUMMINGBIRD.—An adult female was taken and another seen, in a cañon in the interior.

Selasphorus alleni. ALLEN'S HUMMINGBIRD.—Very abundant about the blossoming eucalyptus trees at Avalon, and in small numbers along the cañons and ravines wherever there were flowers. The Allen's Hummingbird is a resident species on this island, as it is found breeding commonly in the spring months. On the adjacent mainland this species is found only during the migrations, and it seems rather strange that it should be so numerous as a permanent resident only thirty miles distant.

Sayornis saya. SAY'S PHŒBE.—Tolerably common about the hill-tops.

Sayornis nigricans. BLACK PHŒBE.—I saw but three individuals and they were along the steep rocky cliffs near the beaches on each side of Avalon.

Corvus corax sinuatus. AMERICAN RAVEN.—Common.

Carpodacus mexicanus frontalis. HOUSE FINCH.—Very numerous on the hill-sides in the interior of the island. The Linnets were feeding to a large extent on the cactus fruits, and there was scarcely a cactus thicket that did not harbor a flock of these birds.

Spinus psaltria. ARKANSAS GOLDFINCH.—I saw only three pairs, and they were in the immediate vicinity of Avalon.

Zonotrichia leucophrys intermedia. INTERMEDIATE SPARROW.—Very common in brushy ravines.

Zonotrichia coronata. GOLDEN-CROWNED SPARROW.—Tolerably common in thick brush in the cañon back of Avalon.

Melospiza lincolni. LINCOLN'S SPARROW.—I saw an individual on two occasions in a door-yard in Avalon.

Passerella iliaca unalaschcensis. TOWNSEND'S SPARROW.—Common in brushy cañon-beds.

Passerella iliaca megarhyncha. THICK-BILLED SPARROW.—Nearly as common as the last, and associated with it. Many specimens of both forms were secured.

Pipilo maculatus megalonyx. SPURRED TOWHEE.—Abundant in brush along dry water-courses. About 40 specimens were secured on Catalina Island. They are readily distinguishable from *P. clementæ*, and yet are slightly different from the mainland form. The bill is longer and proportionately slenderer than in the mainland bird, but in the male the upper and anterior parts are fully as jet black. The 'Catbird' call-note of the Catalina bird is very different in quality from that possessed by the mainland bird. When I first heard it, I was positive that a California Jay was on a distant hill-side, although the Towhee was only a few yards from me.

Lanius ludovicianus gambeli. CALIFORNIA SHRIKE.—I did not see more than five individuals, and only one specimen was secured.

Helminthophila celata sordida. LUTESCENT WARBLER. — Tolerably common but very quiet and secretive. Nearly all the specimens secured had been eating the cactus fruits and their digestive organs and surrounding tissues were colored a bright wine-color. A partial albino specimen was taken.

Dendroica auduboni. AUDUBON'S WARBLER. — Probably the most numerous bird on the island and seen everywhere from the pebbly beaches to the highest hills.

Mimus polyglottos. MOCKINGBIRD. — Common among the cactus patches from the cañon-beds to the hill-tops. Their faces were in many cases brightly stained with the cactus fruit juice.

Salpinctes obsoletus. ROCK WREN. — Tolerably common on the cliffs and steep hill-sides.

Thryothorus bewickii spilurus. VIGORS'S WREN. — Tolerably common in the smaller ravines, but very shy. The 10 specimens secured agree in having the bill quite perceptibly longer than the mainland bird.

Regulus calendula. RUBY-CROWNED KINGLET. — A very few were observed.

Turdus aonalaschkæ. DWARF HERMIT THRUSH. — Tolerably common on the shady hill-sides, and in the deeper cañons. They were feeding on the berries of the California holly.

GEOGRAPHICAL RACES OF *HARPORHYNCHUS* *REDIVIVUS*.

BY JOSEPH GRINNELL.

COMPARISON of a series of Thrashers from northern and central California with one from southern California, as might be expected, discloses two slightly differentiated geographical races. This is another instance of the effect of the moist northerly Pacific coast climate in producing a soft brown coloration, as contrasted with the leaden or ashy shades acquired by birds inhabiting the southern coast region where the rainfall is much less. As the type specimens of this species were obtained in the vicinity of Monterey, the name *redivivus* proper may be restricted to the northern race, while the southern form, which I believe to be sufficiently distinct, will require a new name.